

K121651 1/3

**510(K) SUMMARY  
OF SAFETY AND EFFECTIVENESS**

OCT 12 2012

In accordance with the Food and Drug Administration Rule to implement provisions of the Safe Medical Devices Act of 1990 and in conformance with 21 CFR 807.92, this information serves as a Summary of Safety and Effectiveness for the use of the ORTHOLOC™ 3Di Midfoot/Flatfoot System.

- (a)(1). Submitted By:** Wright Medical Technology, Inc.  
5677 Airline Road  
Arlington, TN 38002
- Date:** June 1, 2012
- Contact Person:** Leslie Fitch  
Regulatory Affairs Specialist  
(901) 867-4120
- (a)(2). Proprietary Name:** ORTHOLOC™ 3Di Midfoot/Flatfoot System
- Common Name:** Bone Plate System
- Classification Name and Reference:** 21 CFR 888.3030 – Class II
- Device Product Code, Device Panel:** HRS: Orthopedic
- (a)(3). Predicate Device:** K061808 - DARCO Locking Bone Plate System  
K113014 – CLAW II Polyaxial Compression System  
K100618 – Orthohelix Variable Angle Plates  
K100502 – Ascension Plating System  
K11663 – DePuy A.L.P.S. Total Foot System

**(a)(4). Device Description**

Wright Medical's ORTHOLOC™ 3Di Midfoot/Flatfoot System is intended for use in stabilization of fresh fractures, revision procedures, joint fusion and reconstruction of bones of the feet and toes. The subject plates are modified from the DARCO Locking Bone Plate System (K061808) or the CLAW II Polyaxial Compression System (K113014). The system contains 23 plates belonging to 1 of 8 plate styles with various sizes and options, each contoured for specific anatomy and designed for specific procedures. All plates feature polyaxial locking screw holes, and some plates have non-locking compression slots and k-wire holes. The plates are made from titanium alloy conforming to ASTM F136 or ISO 5832-3 and accept 2.7 mm and 3.5 mm ORTHOLOC™ 3Di locking and ORTHOLOC™ non-locking screws.

**(a)(5). Intended Use**

The ORTHOLOC™ 3Di Midfoot/Flatfoot System is intended for use in stabilization of fresh fractures, revision procedures, joint fusion and reconstruction of small bones of the feet. Specific examples include:

**Flatfoot Osteotomies**

- Lateral column Lengthening (Evans Osteotomy)
- Plantar Flexion Opening Wedge Osteotomy of the Medial Cuneiform (Cotton Osteotomy)
- Medial Displacement Calcaneal Osteotomy (MDCO)

**Mid / Hindfoot Fusions**

- LisFranc Arthrodesis and/or Stabilization
- 1<sup>st</sup>(Lapidus), 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> Tarsometatarsal (TMT) Fusions
- Intercuneiform Fusions
- Navicular-Cuneiform (NC) Fusion
- Talo-Navicular (TN) Fusion
- Calcaneo-Cuboid (CC) Fusion
- Medial Column Fusion

The indications statement is similar to the DARCO predicate system's indications for use statement and has been tailored to the intended use of the subject device, which has fewer plates than the DARCO system. The bones of the hand, wrist, ankles, and fingers, and toes included in the predicate indications statement are omitted from the indications for this system, because this system includes only plates designed for midfoot and flatfoot procedures. The indications statement has also been modified to include specific procedures for which the system is designed. The addition of these specific examples of osteotomies and arthrodeses does not alter the intended therapeutic effect of the subject device. Some of these procedures are part of a predicate indications statement, and the others are supported by technologically similar predicates designed and marketed for these procedures.

**(a)(6). Technological Characteristics Comparison**

While many of the technological characteristics are the same for the subject device system and the DARCO predicate system, some design changes have been made. The subject plates have a new polyaxial locking feature that offers locking up to 15° off-axis. The subject's locking feature is similar to the locking feature of the predicate CLAW II and identical to the locking feature for ORTHOLOC™ 3Di Hallux (K120359). The subject plates are made from titanium alloy (Ti<sub>6</sub>Al<sub>4</sub>V), while some of the corresponding predicate plates are commercially pure titanium or stainless steel.

**(b)(1). Substantial Equivalence – Non-Clinical Evidence**

Performance testing shows that no new worst-case plates (in bending) are introduced in this system. Through mechanically validated FEA analysis, the worst-case subject ORTHOLOC™ 3Di Midfoot/Flatfoot plates were found not to represent a new worst-case in bending for any of the eight plate styles evaluated when compared to the most similar DARCO or CLAW II plates. A dimensional engineering analysis was also provided in order to help establish mechanical equivalence.

**(b)(2). Substantial Equivalence – Clinical Evidence**

N/A

**(b)(3). Substantial Equivalence – Conclusions**

K121651 <sup>3/</sup>3

The new design characteristics of the subject system do not raise any new types of questions of safety or effectiveness. Performance testing shows that no new worst-case plates (in bending) are introduced in this system. From the evidence submitted in this 510(k) the subject device system can be expected to perform at least as well as the predicate systems.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Mail Center - WO66-G609  
Silver Spring, MD 20993-0002

OCT 12 2012

Wright Medical Technology, Inc.  
% Ms. Leslie H. Fitch  
5677 Airline Road  
Arlington, TN 38002

Re: K121651

Trade/Device Name: ORTHOLOC 3Di Midfoot/Flatfoot System

Regulation Number: 21 CFR 888.3030

Regulation Name: Single/multiple component metallic bone fixation appliances and accessories

Regulatory Class: II

Product Code: HRS

Dated: September 19, 2012

Received: September 20, 2012

Dear Ms. Fitch:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical

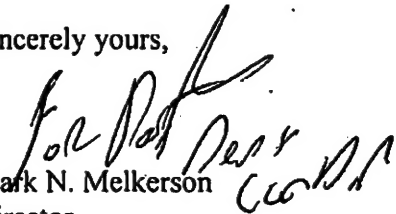
Page 2 – Ms. Leslie H. Fitch

device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucml15809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of Surgical, Orthopedic  
and Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## Indications for Use Statement

510(k) Number (if known): ~~Not yet assigned.~~ K121651

Device Name: ORTHOLOC™ 3Di Midfoot/Flatfoot System

Indications for Use:

The ORTHOLOC™ 3Di Midfoot/Flatfoot System is intended for use in stabilization of fresh fractures, revision procedures, joint fusion and reconstruction of small bones of the feet.

Specific examples include:

### Flatfoot Osteotomies

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- Plantar Flexion Opening Wedge Osteotomy of the Medial Cuneiform (Cotton Osteotomy)
- Medial Displacement Calcaneal Osteotomy (MDCO)

### Mid / Hindfoot Fusions

- LisFranc Arthrodesis and/or Stabilization
- 1<sup>st</sup> (Lapidus), 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> Tarsometatarsal (TMT) Fusions
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- Calcaneo-Cuboid (CC) Fusion
- Medial Column Fusion

*K. Asundi*  
for (Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

510(k) Number K121651

Prescription Use X  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)